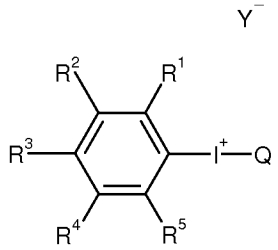
**Amendments to the Claims**

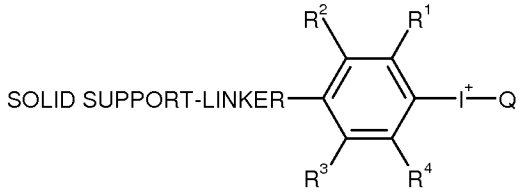
This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method for the production of an aromatic or hetroaromatic fluorine-labelled compound comprising fluoridation of an iodonium salt of Formula (I) or (II):




(I)




(II)

wherein:

Q is an electron deficient aromatic or heteroaromatic moiety;

each of $R^1$, $R^2$, $R^3$, $R^4$ and $R^5$ is independently hydrogen, -O($C_{1-10}$ alkyl) or $C_{1-10}$ alkyl; and

$Y^-$ is a counter ion such as trifluoromethane sulfonate (triflate), perfluoro $C_2$-$C_{10}$ alkyl sulphonate, trifluoroacetate, methane sulfonate (mesylate), toluene sulfonate. (tosylate), tetraphenylborate;

to give a product of general formula (III):

Q-F (III)

where Q is substituted with one or more substituents selected from $C_{1-10}$ alkyl, -O($C_{1-10}$ alkyl), -C(=O) $C_{1-10}$ alkyl, -C(=O)$NR^6$($C_{1-10}$ alkyl), -($C_1$-$C_6$ alkyl)-O-($C_1$-$C_6$ alkyl), $C_{5-14}$ aryl,

-O($C_{5-14}$ aryl), -C(=O)$C_{5-14}$ aryl, -C(=O)$NR^6$($C_{5-14}$ aryl, $C_{5-14}$ heteroaryl, -O($C_{5-14}$ heteroaryl), -C(=O)$C_{5-14}$ heteroaryl, -C(=O)$NR^6$($C_{5-14}$ heteroaryl), $C_{3-10}$ cycloalkyl, -O($C_{3-10}$ cycloalkyl), -C(=O)($C_{3-10}$ cycloalkyl), -C(=O)$NR^6$($C_{3-10}$ cycloalkyl), $C_{3-10}$ heterocyclyl, -O($C_{3-10}$ heterocyclyl), -C(=O)($C_{3-10}$ heterocyclyl), -C(=O)$NR^6$($C_{5-14}$ heterocyclyl) with a fluoride ion source characterised in that the reaction solvent is either 100% water or a mixture of water and a water miscible solvent ~~comprises water~~.

2. (Cancelled) ~~A method as claimed in claim 1, wherein the reaction solvent is 100% water.~~

3. (Cancelled) ~~A method as claimed in claim 1 wherein the reaction solvent is a mixture of water and a water miscible solvent.~~

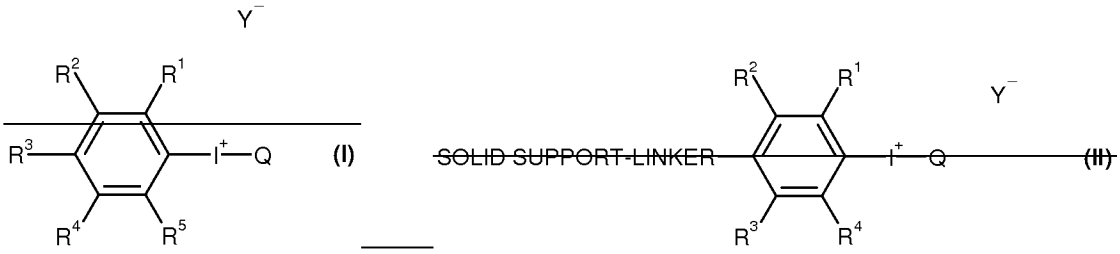
4. (Currently Amended) A method as claimed in claim 1 ~~3~~, wherein the water miscible solvent is acetonitrile, ethanol, methanol, tetrahydrofuran or dimethylformamide.

5. (Currently Amended) A method as claimed in claim 1 ~~3~~ wherein the volume:volume ratio of water:water-miscible solvent is between 1:99 and 1:1.

6. (Original) A method as claimed in claim 5 wherein the volume:volume ratio of water:water-miscible solvent is from 10:90 to 30:70.

7. (Previously presented) A method as claimed in claim 1, wherein the fluoride ion source is potassium, caesium or sodium fluoride.

8. (Cancelled) ~~A method as claimed in claim 1 for the fluoridation of an iodonium salt of Formula (I) or (II):~~




~~wherein:~~

~~Q is an electron deficient aromatic or heteroaromatic moiety;~~

~~each of $R^1$, $R^2$, $R^3$, $R^4$ and $R^5$ is independently hydrogen, $O(C_{1-10}$ alkyl) or $C_{1-10}$ alkyl; and~~

~~$Y^-$ is a counter ion such as trifluoromethane sulfonate (triflate), perfluoro $C_2$-$C_{10}$ alkyl sulphonate, trifluoroacetate, methane sulfonate (mesylate), toluene sulfonate. (tosylate), tetraphenylborate;~~

~~to give a product of general formula (III):~~

~~Q-F (III)~~

~~where Q is as defined for general formulae (I) and (II).~~

9. (Currently Amended) A method as claimed in claim 1 ~~8~~, wherein each of $R^1$-$R^5$ is independently selected from hydrogen, $C_{1-3}$ alkyl and -O-($C_1$-$C_3$ alkyl).

10. (Currently Amended) A method as claimed in claim 1 ~~8~~ wherein, in the compound of Formula II, the "solid support" is polystyrene, polyacrylamide, polypropylene or glass or silicon coated with such a polymer.

11. (Currently Amended) A method as claimed in claim 1 ~~8~~ wherein the solid support is in the form of small discrete particles or is a coating on the inner surface of a reaction vessel.

12. (Currently Amended) A method as claimed in claim 1 ~~8~~, wherein, in the compound of Formula II the "linker" is $C_{1-20}$ alkyl or $C_{1-20}$ alkoxy, attached to the resin by an amide ether or a sulphonamide bond or a polyethylene glycol (PEG) linker.

13. (Currently Amended) A method as claimed in claim 1 ~~8 wherein the aromatic group Q is substituted with one or more substituents selected from $C_{1-10}$ alkyl, $O(C_{1-10}$ alkyl), $C(=O)$ $C_{1-10}$ alkyl, $C(=O)NR^6(C_{1-10}$ alkyl), $(C_1$-$C_6$ alkyl) O $(C_1$-$C_6$ alkyl), $C_{5-14}$ aryl, $O(C_{5-14}$ aryl), $C(=O)C_{5-14}$ aryl, $C(=O)NR^6(C_{5-14}$ aryl, $C_{5-14}$ heteroaryl, $O(C_{5-14}$ heteroaryl), $C(=O)C_{5-14}$ heteroaryl, $C(=O)NR^6(C_{5-14}$ heteroaryl), $C_{3-10}$ cycloalkyl, $O(C_{3-10}$ cycloalkyl), $C(=O)(C_{3-10}$ cycloalkyl), $C(=O)NR^6(C_{3-10}$ cycloalkyl), $C_{3-10}$ heterocyclyl, $O(C_{3-10}$ heterocyclyl), $C(=O)(C_{3-10}$ heterocyclyl), $C(=O)NR^6(C_{5-14}$ heterocyclyl),~~

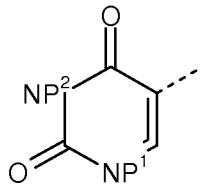
wherein $R^6$ is H, $C_1$-$C_6$ alkyl, $C_3$-$C_{10}$ cycloalkyl, $C_3$-$C_{10}$ heterocyclyl, $C_4$-$C_{10}$ aryl or $C_4$-$C_{10}$ heteroaryl;

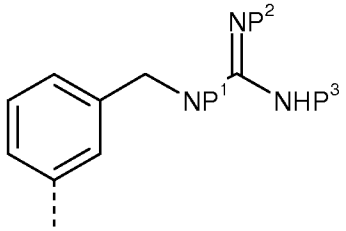
any of which may optionally be substituted with OH, $NHR^6$, COOH or protected versions any of these groups; or alternatively

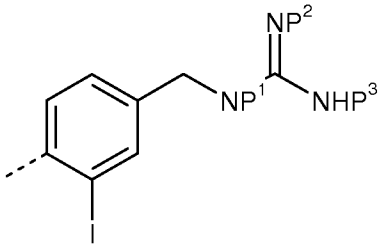
any two adjacent substituents may form a four- to six-membered carbocyclic or heterocyclic ring, optionally fused to a further aromatic, heteroaromatic, carbocyclic or heterocyclic ring.

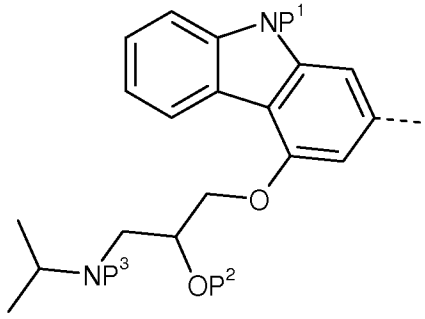
14. (Currently Amended) A method as claimed in claim 1 ~~13~~, wherein the aromatic moiety Q has an additional substituent selected from OH, $NHR^6$ or halogen.

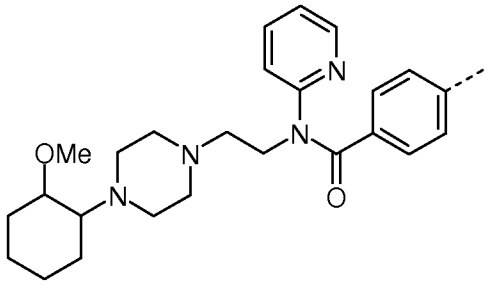
15. (Currently Amended) A method as claimed in claim 1 ~~8~~, wherein the group Q is one of the following:

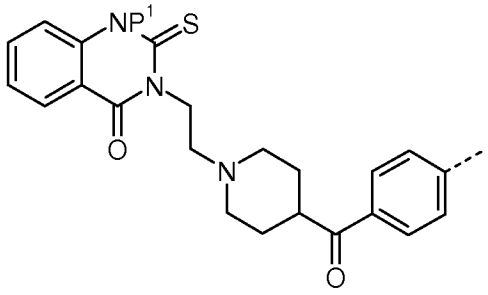


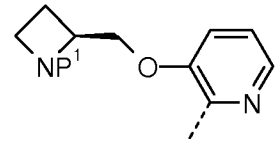

NP2
NP1
NHP3

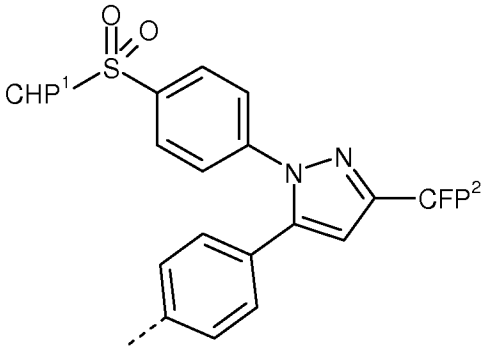

NP2
NP1
NHP3

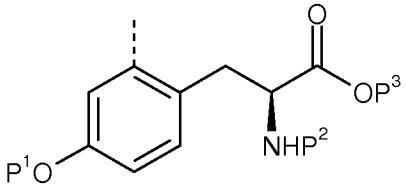

NP1
O
NP3
OP2

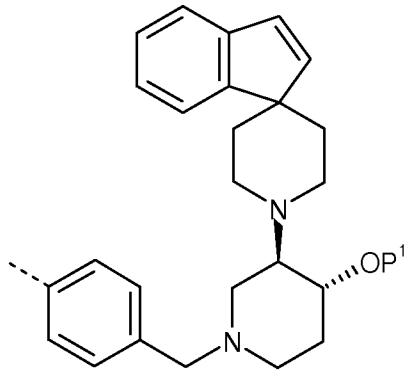

N
N
OMe
N
N
O

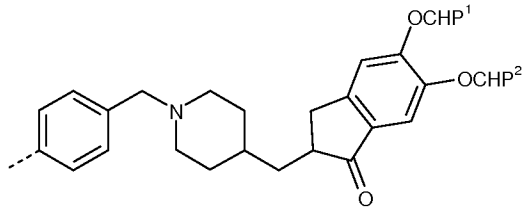

NP1
S
N
O
N
O

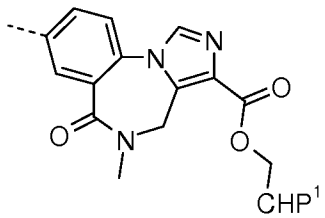

NP1
O
N

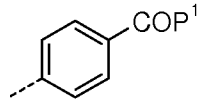

O
O
S
CHP1
N
N
CFP2


O
OP3
NHP2
P1O


N
OP1
N

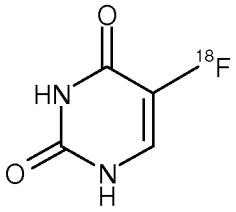

OCHP1
OCHP2
N
O

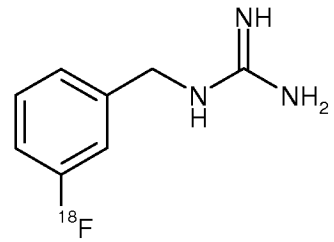

N
N
O
O
N
O
CHP1

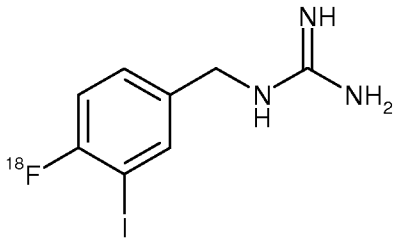


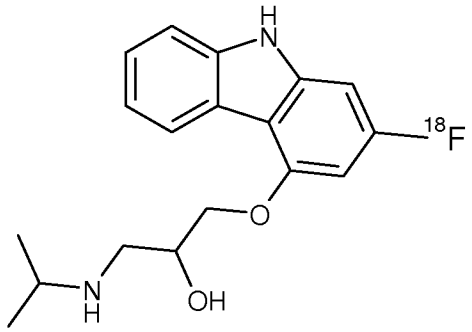

16. (Previously presented) A method as claimed in claim 1, wherein the fluorine-labelled compound is an [$^{18}$F]-labelled compound and the fluoride ion source is a source of $^{18}F^-$.

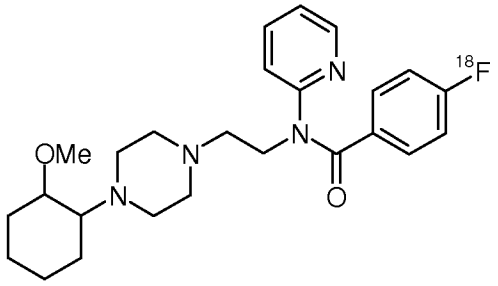
17. (Previously presented) A method as claimed in claim 1, wherein the F-labelled compound is selected from the following:

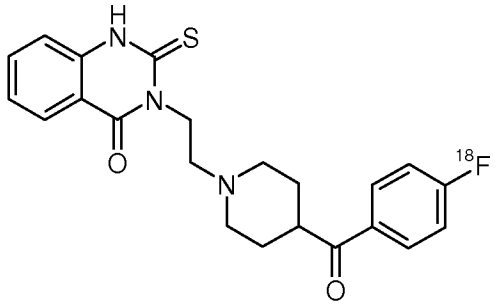


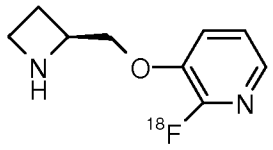



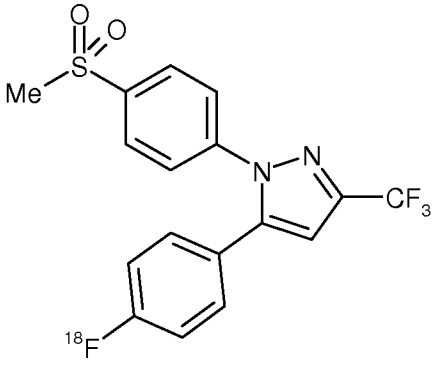



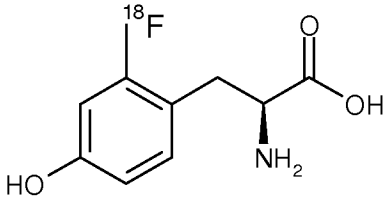



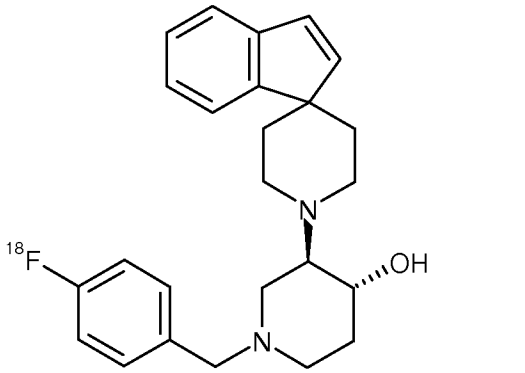

N
$^{18}$F
OMe
N
N
N
O

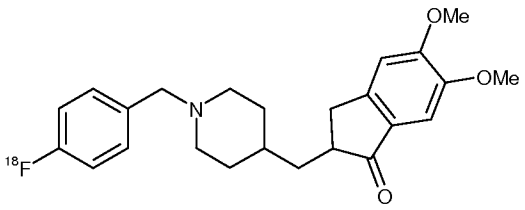

H
N
S
N
O
N
$^{18}$F
O

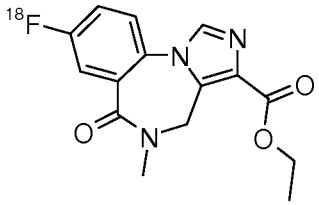

N
H
O
N
$^{18}$F

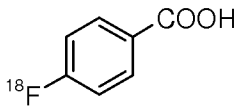

O
O
S
Me
N
N
CF$_3$
$^{18}$F


$^{18}$F
O
OH
NH$_2$
HO




18. (Previously presented) A method as claimed in claim 1, further including, in any order, one or more of the following steps: removal of excess $^{18}F^-$, for example by ion-exchange chromatography; and/or

(i) removal of the protecting groups; and/or

(ii) removal of organic solvent; and/or

(iii) formulation of the resultant compound as an aqueous solution.

19. (Original) A kit for the production of an aromatic fluorine-labelled compound, the kit comprising:

(i) a vial containing an aqueous solvent for dissolving the fluoride ion source; and

(ii) a reaction vessel containing an iodonium salt.

20. (Original) A kit as claimed in claim 19, wherein the solvent is 100% water.

21. (Original) A kit as claimed in claim 19 wherein the solvent is a mixture of water and a water miscible solvent.

22. (Original) A kit as claimed in claim 21, wherein the water miscible solvent is acetonitrile, ethanol, methanol, tetrahydrofuran or dimethylformamide.

23. (Previously presented) A kit as claimed in claim 21 wherein the volume:volume ratio of water:water-miscible solvent is between 1:99 and 1:1.

24. (Original) A kit as claimed in claim 23 wherein the volume:volume ratio of water:water-miscible solvent is from 10:90 to 30:70.

25. (Previously presented) A kit as claimed in claim 19 wherein the iodonium salt is compound of general formula (I) or (II).

26. (Previously presented) A kit as claimed in claim 20 wherein the iodonium salt is a compound of general formula (II) and the solid support comprises a coating on the surface of the reaction vessel.

27. (Previously presented) A kit as claimed in claim 19, wherein the reaction vessel is a cartridge or a microfabricated vessel.

28. (Previously presented) A kit as claimed in claim 19, further comprising a source of fluoride ions.